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XV.—*On the Physiological and Psychological Evidence in support of the Unity of the Human Species.* By ROBERT DUNN, F.R.C.S., Eng.\*

IN two former communications to this Society,—One “*On the varying forms of the Human Cranium, viewed in connection with the outward circumstances, social state, and intellectual condition of man ;*” and the other, “*On the Tegumentary differences which exist amongst the different races of men*”,—I have enforced the argument for the unity of the human species. But to my mind, the evidence which is furnished by physiology and psychology on the same subject is equally conclusive, and I have on the present occasion to solicit your attention to some observations bearing on this view of the question, and which, unless I am greatly mistaken, tend to strengthen and confirm the conviction, that the genus *Homo* is one. I make no apology, for asking the attention of the Society to considerations on a subject so strictly and decidedly physiological and psychological; for, on a review of the past, I am quite sure no one can accuse us of indulging too freely or too often in such themes, at our evening meetings. On the contrary, indeed, to me it is a marvel, that papers of a physiological bearing should have so rarely been read before us; and which, seeing that Ethnology comes legitimately within the province of the medical inquirer, can, I fear, only be accounted for by what is certainly a still far greater marvel,—that, in this great metropolis, so few of our medical brethren should be associated with us. It is true, that our society had its origin among them, and I well remember the enthusiasm which existed, and in which I participated, at the time of its inauguration. It is equally true, that its presidential chair is at the present time filled by a distinguished member of our profession,† and that it has not only been filled by a Brodie and a Conolly, but even by Dr. Pritchard himself,—our great ethnologist,—the founder of Ethnological science in this country; still, and I must say it,—ethnology, or at least the Ethnological Society of London, has not received from the medical profession of this great metropolis that general and cordial support which might have been expected, and to which I think it is entitled; for surely “the proper study of mankind, is man,” in all his varieties and diversified aspects; and moreover, if there be one branch of the inquiry more interesting than another, it is unquestion-

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\* Read, July 20th, 1859.

† Sir James Clarke, Bart.

ably that in relation to the psychological differences which exist among, and which characterize, the different races of the great family of Man.

On a general survey of the whole animal kingdom, it must be conceded, that man is the only being adapted by his anatomical structure and organization to go erect, so that the graphic and descriptive contrast of the poet is not more pointed than it is just.

"Pronaque cum spectent, animalia cetera terram,  
Os homini sublime dedit; cælumque tueri  
Jussit; et erectos ad sidera tollere vultus."

The erect attitude, and biped progression are peculiarly and exclusively the prerogatives of man, and at a glance they reveal to us his most obvious and distinguishing characteristics. For those anthropomorphous animals whose structure and organization approximate the most to his are all *quadrumanus*, and having opposable *thumbs* upon their lower as well as upon their upper extremities, they are not fitted for the erect attitude, nor for biped progression, but they are admirably adapted and organized for living upon trees, for climbing, *grasping*, and *holding*;—in the expressive language of Cuvier, they are

"Les grimpeurs, par excellence."

But they want, as firm supports for the erect posture and biped progression, the breadth, strength, and solidity of the human foot,—Man's large and prominent os calcis, with which to tread upon the earth; his capacious and expanded pelvis, as a basis of support to the upright trunk; and the length and strength of his lower limbs, for progression and support. It has been aptly remarked,—"No instance has ever been produced of a monkey supporting the body *in equilibrio* on *one foot only*, and that the cause of this prerogative of the human organization is to be found, in the breadth of the human foot, in the resting of its entire surface upon the ground, on the bony and muscular strength of the lower extremity, and in the length of the cervix femoris."\*

The Myth of the *Wild-man* of the woods has vanished from among us, but, strange to say, Lamarck's theory of the transmutation of species, and that man is the lineal descendant from the monkey, has been revived of late. This fanciful hypothesis has found a warm and zealous advocate in the popular author of *The Vestiges of the Natural History of Creation*;—one, of whom it has been truly said, "that his clear, pleasant, racy

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\* Lawrence's Lectures on the Natural History of Man.

self-sufficient style, has captivated, when the dry, heavy, technical disquisitions and manuals of professors have disgusted ;” and of whom the late gifted professor, Edward Forbes, has justly observed, that “The *man* who succeeds in half persuading the majority of his readers of his six editions, and a supplement to boot, that they and all mankind are the lineal descendants of mud-worms, and monkeys, and this too in spite of the protests of all living investigators of these several animals, anatomically and palæontologically considered (man included) has a power within him which might be turned to better purposes, and when he has added *knowledge to that power*, will, we trust, do so, calmly confessing his sins and publicly recanting his faith in the transmutation of species.”\* This ingenious advocate admits his inability to indicate the branch of the simian family from which we are the lineal descendants ; nor has he been pleased to inform us, whether he holds to the opinion of Monboddo and Rousseau, and believes with these philosophers, that men like their reputed ancestors, had originally tails. But he does maintain the necessity of two local origins for the human race ; one for the Asiatic, European, and American varieties, and another for the African ; and that the former, he says, “seem to be connected with the great development of the *Quadrumana* in Southern Asia, and the latter with that of Western Africa. The Chimpanzee, and more especially the *Troglodytes Gorilla*, among apes and monkeys, may be *proximus huic* ; still to man, even in his lowest and most degraded type, there can be no dispute that it is “*longo sed proximus intervallo*.” For, in the eloquent language of Professor Sedgwick, “Man stands by himself the despotic lord of the living world ; not so great in organic strength as many of the despots that went before him on nature’s chronicle, but raised far above them all by a higher development of brain ; by a frame-work that fits him for the operations of mechanical skill ; by superadded reason ; by a special instinct for combination ; by a prescience that tells him to act prospectively ; by a conscience that makes him amenable to law ; by conceptions that transcend the narrow limits of reason ; by hopes that have no full fruition here ; by inborn capacity of rising from individual facts to the apprehension of general laws ; by a conception of a cause for all the phenomena of sense ; and by a consequent belief in a God of nature.”†

The barrier is indeed impassable which separates man from

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\* Literary Papers of Professor E. Forbes.

† Sedgwick’s Discourse on the Studies of the University of Cambridge.

the chimpanzee, and the claims to a *common humanity* are immediately recognised, for they are irresistible, wherever *two-handed* and *two-footed man* makes his appearance, however debased the type may be and mean the garb in which that humanity is clothed. Having already, however, whilst considering the varying forms of the human cranium, and the tegumentary difference which exists among the different races of men, indicated the legitimate inference to which such considerations so clearly and indisputably conduct us,—I need not now dwell upon those minor anatomical peculiarities which have been noticed among the different races of men; such as the differences of stature; the varying shapes of the pelvis; the cucumber skin of the negro; the elongation of his heels, and the breadth and flatness of his feet—for they present no valid objection, but, on the contrary, rather tend to strengthen and enforce the argument for the unity of the human species.

On entering, however, upon the consideration of the physiological evidence, the narrow limits of a paper like the present necessarily restrict me to its more salient points. Dr. Prichard, indeed, has exhausted the subject, and all naturalists and physiologists—and who, of all others, are the best qualified to form a correct opinion on the subject—have subscribed to the *truth* of Dr. Prichard's general axiom, that while on the one hand, the great laws of the animal economy, such, for instance, as those expressive of the periods and duration of life, the economy of the sexes, the phenomena of parturition and of reproduction, are *constant and regular in each* particular species of *animals*, with only occasional slight deviations, resulting from external influences, so, on the other hand, in regard to these same particulars, there is found to exist *decided differences* among races of animals which are specifically distinct, however much they may appear to resemble each other.

Now recognizing in this axiom a *physiological fact*, and applying it as a test of the unity of species in the case of the whole family of man, the legitimate inference is clear and indisputable.

First, in reference to age, there is a remarkable uniformity in the average duration of life among all the nations of the earth when placed under similar circumstances in regard to climate and modes of life. The extreme age of the Negro and American Indian is as great as that of the European. But the contrast between man and those anthropomorphous animals, whose organization approaches the nearest to his, is striking; the utmost limit to which the life of the troglodytes gorilla extends is not more than thirty years, and the age of the inferior species of the chimpanzee does not range so high.

Secondly. As to the period of puberty, and the first appearance of the catamenial flux, there is found to exist great uniformity throughout the habitable globe. In proof of this, Mr. Robertson of Manchester, with great labour and indefatigable industry, has collected a mass of evidence from all parts of the world. He has established beyond contradiction that there exists no considerable difference either in the average period of puberty, or in the earliest date of menstruation, among the various tribes who are scattered over the whole habitable earth from the equator to the poles; and that neither does a cold climate retard, nor a warm one accelerate it, as has been popularly supposed. The only marked exception occurs in the case of the Hindoo females, with whom, on an average, the catamenial flux appears about two years earlier than it does among other nations. But Mr. Robertson justly, in my opinion, considers that the peculiar habits of the Hindoos tend in more ways than one to *force* forward the period of puberty. For instance, "It is the law of the Shastras, that females shall be given in marriage *before* the occurrence of menstruation, and that, should *consummation not* take place until after this event, the marriage is a *sin*. Accordingly it is the custom in Lower Bengal to send the girl at the age of nine years to the house of her husband, unless the latter be so distant that it cannot be done. And two ancient Hindoo sages are of opinion, that if the marriage is not consummated before the first appearance of the catamenia, the girl becomes "*degraded in rank*." But at Bangalore it would seem that this revolting custom does not obtain, the husband refraining from taking his wife to his own house, till not less than sixteen days have elapsed subsequently to puberty. Now, as has been well observed, "it can scarcely be questioned, that such a premature sexual excitement will have a tendency to accelerate the period of puberty; and that when this is constantly acting through a long succession of generations, an early puberty may come to be the character of the race."

Again, according to Mr. Robertson's inquiries, the *frequency of the catamenial flux*, and the *epoch of life to which it extends*, are equally constant among different races, and the duration of pregnancy, as we are all well aware, is the *same* amongst all.

Thirdly. *As to the economy of the sexes.* The *fertility of hybrid races*, and even where the affinity is most remote, is beyond all dispute. Indeed, "*half-castes*" very generally combine the best attributes of the two races from whence they originate: thus, when the parents are Europeans on the one side, and the aborigines of any country on the other, we find the intelligence and mental activity of the

*European*, and the climatic adaptation of the *native*, developed. It was, indeed, at one time believed, on the authority of Count Strzlecki, that when a native female of the American, Polynesian, or Australian races, has once been impregnated by a European male, she thenceforth loses all power of conception from intercourse with the male of her own race. But the utter baselessness of a belief so inconsistent with all the known facts connected with the history of the human races has been indisputably proved, so far as the aboriginal females of Australia are concerned, by Dr. F. R. H. Thomson, surgeon in the Royal Navy; and in proof of this, I need only remind you of the paper which he read before this society, and which is published in the third volume of its *Transactions*, "On the reported incompetency of the 'Gins,' or Aboriginal Females of New Holland, to procreate with a native male after having borne half-caste children to a European or white." Dr. Thomson, indeed, admits that, wherever European settlers are commingled with the Aborigines of Australia, the native race disappears. This, however, he maintains, does not arise *from any deviation* of nature's laws, "but because the European, wherever he takes with him his civilization, takes with him his vices also; so that drunkenness and syphilitic disease soon become rife among the neighbouring population and cause their decline. "We all know," says he, "that many tribes of both North and South American Indians are extinct, and that in the gradual disappearance of such races, there is a degree of infecundity connected with their decline, and with the advance of civilized life into their distant prairies; but it has resulted from the diseases, the altered habits, the enervating and depressing vices which the white man takes with him, when he goes forth to seek a new home in the land of savages." He thus concludes, "That the various races of mankind can commingle and procreate without losing the capability of reproducing again, with their peculiar division of the human species, is abundantly proven, wherever the European has turned his steps. Let it be to North or South America, India, Africa, Japan, China, Polynesia—the traveller will find the half-caste, the mulatto, the creole, the olive—too often the elder brother of the *jet black*—the brown, the olive, and unmixed younger children to confirm, what is now asserted confidently, to hold good of the Aborigines of New Holland."\*

I cannot dismiss the consideration of the physiological evidence without adverting to the confirmation which the revelations of the microscope have given to the dicta of Holy Writ—

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\* Journal of the Ethnological Society, vol. iii, p. 246.

that “*God has made of one blood all the nations of the earth, to dwell upon all the face of the earth*”; for these prove to demonstration that human blood, whether from Caucasian, Mongolian, Æthiopian, or half-caste, presents the same identical corpuscles, and contains the same elementary constituents—in other words, that the blood is precisely the same in all the races of man.

We may now proceed to the most interesting and important branch of the whole inquiry—the *psychological*: for, beyond all dispute, it is in the *physical character and its manifestations* that the attributes of humanity essentially and peculiarly consist. Before entering, however, upon the consideration of the psychological evidence in support of the unity of the human species, it appears to me to be expedient for its better understanding and appreciation, to pass in review the leading phenomena of the mental states, taking a cursory glance as we proceed at the more prominent facts of comparative psychology.

Now the more closely we observe and diligently study the composite nature of man, as an animal and social, a moral and religious, as well as an intellectual and thinking being, the more clear and irresistible becomes the conviction, that the genus homo is endowed with innate and instinctive cravings and impulses—animal appetites and instincts; with personal or individual, and social propensities and affections; with emotional, moral, and religious intuitions and feelings, as well as with intellectual faculties, reasoning and reflective powers.

Man, of whatever race, is at first the mere creature of sensation and instinct. As soon as embryonic life is passed, and an independent individual existence is established, the nascent consciousness becomes awakened—the senses coming into play from the moment of birth. And thus his outer life begins with consciousness, and with consciousness it ends. But as for consciousness itself, that is an ultimate fact, beyond which we cannot penetrate. It is an essential attribute of animal life; not a particular faculty, co-ordinate with the other mental faculties, but the universal condition of intelligence. It is equivalent, in short, to the knowledge that we possess of our own personal identity, for it is implied in every sensation which we experience, and in every mental act that we perform—on *feeling, perceiving, willing, and thinking*. We are all aware that the great and fundamental mystery of life consists in the relations of consciousness, and of that dynamical agency, or intellectual force, which we call volition, or the will, to the functions of the special senses, and to those of the perception and intellectual faculties, which connect man as a sentient, percipient, and thinking being, with his own organization and



with the world without. But consciousness is one and indivisible; its unity is the deepest and most indisputable fact in the nature of man, and we can best conceive of it in relation to time, not only as an incalculably rapid succession of acts or states, but as passing through a series of successive developments.

Now, there are three phases of consciousness common to all the races of man, successively developed,—the sensational, the perceptive, and the intellectual, and under these, all the mental phenomena of man, of whatever kind, are comprised and may be grouped. To *feel*, to *perceive*, and to *think*, in other words, *sensation*, *perception*, and *intellection*, are different and distinct acts or states of consciousness, successively developed. For we feel, before we can perceive, we perceive and form ideas before that we can think,—and long ere we can either reason or reflect, we manifest the animal instincts and the social propensities, affections and feelings. Self-consciousness as the earliest is necessarily the lowest phase of mental development, for in it the mind, at first, exists in a state of base receptivity; the senses, indeed, come into play from the moment of birth, but the intelligence is purely *sensational*, the feelings are simply those of pleasure and pain, and the impulses to action are innate and instinctive. All our actions are automatic reflex, consensual, and instinctive, until the perceptive consciousness has been developed. But I need not dwell upon the phenomena of the sensational consciousness,—that is, on the intuitions of the special senses,—sensori-motor, consensual, and instinctive feelings and actions, for these at least, beyond all dispute, are common to all the races of man.

And so too, it is equally evident, are the instinctive intuitions of the perceptive consciousness, for they are a common inheritance. The instincts, as the untaught activities of our animal nature, are *innate*, and as subjective feelings they arise in obedience to certain laws of our nature, or are brought into action in direct response to stimuli acting upon the sensational consciousness from *without*;—but, no sooner has the perceptive consciousness begun to dawn, than greater mental activity is manifested, increasing in intensity and energy, as the sphere of its action is widened; arising, not only from the direct conflict of the perceptive faculties with the external world, but also from the development of the will or intellectual force, and from the evolution and play of the individual or personal and social propensities and affections, and of the emotional, moral, and religious intuitions and feelings. For, in the second stage of our mental progress, *ideas* are formed and retained in the mind, for *memory* exists, *volitional power* is developed and exercised, and *emotional sensibility* is awakened and

manifested ; and thus, in the progress of mental development, to the sensational the perceptive phenomena are superadded ; these are *ideation* and *volition*, with their associates *memory* and *emotional sensibility*. The genesis of the *will* and of the *memory* is in the perceptive consciousness ; and it is, through the perceptive consciousness, that the animal propensities and affections, and the emotional, moral, and religious impressions and feelings are evolved and brought into play. For the perceptive consciousness is not limited in the sphere of its action to the mere ideation of external existences, their sensible qualities and physical attributes. It has a far more extended range, for excepting the sensational intuitions, all our immediate or intuitive knowledge of whatever kind, appertaining to man, as a social, moral, and religious being, has its origin or source in perceptive experience. Long before he has attained even to the utterance of articulate speech, and as soon as the perceptive consciousness begins to dawn, and the power of recognition is awakened, he is able *intuitively* to interpret the tones, gestures, and expressions of emotion, and becomes sympathetically effected by them. Before all teaching, he has an intuitive æsthetic sense of the true, the beautiful, and the good ; of sublimity in nature, and of harmony in sound. Moral intuitions of right and wrong, and emotional of *awe*, *veneration* and *reverence*. Thus, an intuitive apprehension of *right* and *wrong* is attached to certain actions, and evidently *precedes* in his mind any distinct comprehension of the language, by which moral truths are conveyed. The flush upon the cheek, and the early sense of shame, come before there has been any traces of thought, as the consequences of misconduct or crime. In the expressive language of Lord Bacon—"The light of nature not only shines upon the human mind, through the medium of the *rational faculty*, but by an *internal instinct*, according to the law of conscience, which is a sparkle of the purity of man's first estate." And so again with the moral are closely connected the religious intuitions of his soul. These are developed more or less distinctly amongst the earliest of human sentiments, in the form of *awe*, *veneration*, and *reverence*, inspired by objects of sublimity, grandeur, vastness, and mystery. In process of time, other elements, first the intellectual, then the moral, are joined to our primary intuitions, until at length man reaches the elevation of an intelligent, voluntary, and cheerful dependence upon an Infinite and all-perfect Being."

In man's moral and religious attributes the inferior animals do not participate, and this constitutes an immutable distinction between him and them. In regard, however, to sensa-

tional and perceptive experience—to the phenomena of the sensational and perceptive consciousness, they both stand on the same platform ; for the mental process is alike *intuitive* in *all*, and the difference is one of *degree*, and not of *kind*. In some respects, indeed, they far surpass him, for he has neither the far-seeing eye of the eagle, nor the scent and smell of the hound. The true difference between man and the lower animals rests specifically and fundamentally on the greater number and higher nature of his perceptive and intellectual faculties, and on his moral and religious attributes. The dog not only knows his own master, and remembers scenes and actions where they have been associated together, but, from habitual companionship, acquires an intuitive comprehension of his master's emotional nature, which enables him at once and without hesitation to recognise its manifestations, and causes him to be sympathetically affected by them. He may be said to have well nigh all the rudiments of our perceptive knowledge—ideation, emotion, memory, and volition, but he holds them in an instinctive form. He recognises his master by certain characteristics, but disguise them and you baulk his instinct. He is deficient in *reflective*, as opposed to *intuitive* or *immediate* knowledge.

It is, however, through the phenomena of the intellectual consciousness, retrospection, and the operations of thought, ratiocination, and reflection, that man is raised so immeasurably above the brute creation, and attains to his dominant mental development in the highest reason, and the freest will. The human mind rising above sensation, and above perception, soars into the region of representative knowledge, and grasps through the intellectual and reflecting faculties, abstract ideas, and necessary and universal truths ; finding articulate utterance and expression for them in the noble faculty of speech in language.

If such, then, be the leading phenomena of the mental states, it remains to be inquired whether they are a common inheritance, and manifested by the whole family of man.

But before doing this, there is another attribute of humanity—the exclusive prerogative of *man*, yet *common to all the races of man*—the *faculty of articulate speech*, which is far too important to be overlooked. It is the crowning gift of his beneficent Creator, and as a distinguishing and characteristic attribute of humanity, it not only now, but has always existed among all the nations of the earth. It is, indeed, as natural for man, constituted as he is, and endowed with the faculty of speech, when vividly affected, to give expression and to find utterance in articulate sounds, for his feelings, emotions, ideas,

and thoughts, as it is for him voluntarily to use his locomotive powers in progression. To the natural language of inarticulate sounds, gestures, and actions, he at first added the conventional language of signs, and afterwards alphabetical writings, until, in the fulness of time, his invention of the art of printing consummated the benefits derived from the noble prerogative of speech.

As the instrument of thought and reasoning, the value and importance of language is paramount. We reproduce in speech the mutual relation of our thoughts to objects, and the order and relation of our thoughts themselves. Words are thus the pabulum of thought. They are, in fact, the final expression of that mental process, as well as the depository of its final results, by which knowledge becomes definite, *exact*, and *communicable*, and through which the human mind, elevated above *sensation* and above *perception*, soars into the region of representative knowledge, and rising to its highest phase of development, gives to reason its all but infinite range, and all but omnipotent force. Philological researches into the origin and structure of languages have a direct bearing upon the great question at issue. They furnish a powerful argument in support of the identity and unity of the human species, by establishing, among other points, that of the genealogical relations of tribes, long since dispersed, from their original centres, and associated at present by strongly-marked physical and psychical differences. Had I the time I would still have to regret my utter inability to follow up this subject; but the philological researches into the origin of languages—their analysis, composition, and classification, which originated in the speculations and discoveries of Leibnitz, have been successfully pursued by William Von Humboldt, Bunsen and others abroad, and by Prichard and Latham among ourselves. To our honorary associate, the late Baron Bunsen, we are especially and greatly indebted; and most sincerely do I wish that I could rouse into activity the mental energy of some of the fellows of this society, who from their philological attainments are so eminently qualified to discuss this subject, and to place before us the bearings of the philological evidence on the great problem we are now considering. It must be conceded, that it is to philological inquiry we must look for the chief evidence in determining the question of the radiation of the human family from a single centre, or from several centres.

We may now revert to the inquiry, whether the psychical characters or phenomena of the mental states, which I have dwelt upon, are common to all the races of man. Not only to the European as the most civilized, but also to the bushman,

the negro, and the Australian savage—the most degraded types of the genus *homo*—and whom it has been a fashion with some to represent as little better than improved apes, and as having no sufficient claims to the brotherhood of humanity.

Truly the contrast when “*we look on this picture and then on that*” is striking and startling. And vividly has this contrast been depicted, and cogently has it been reasoned upon, by Dr. Prichard. “Let us imagine for a moment,” says he, “a stranger from another planet to visit our globe, and to contemplate and compare the manners of its inhabitants; and let him first witness some brilliant spectacle in one of the highly-civilized countries of Europe—the coronation of a monarch—the installation of St. Louis on the throne of his ancestors, surrounded by an august assembly of peers and barons, and mitred abbots, anointed from the cruise of sacred oil brought by an angel to ratify the divine privilege of kings. Let the same person be carried into a hamlet in *Negroland*, in the hour when the sable race recreate themselves with dancing and barbarous music; let him then be transported to the saline plains, over which bald and tawny Mongols roam, differing but little in hue from the yellow soil of their steppes, brightened by the saffron flowers of the iris and tulip; let him be placed near the solitary den of the *bushman*, where the lean and hungry savage crouches in silence like a beast of prey, watching with fixed eyes the birds which enter his pitfall, or the insects and reptiles which chance brings within his grasp; let the traveller be carried to the midst of an Australian forest, where the squalid companions of kangaroos may be seen crawling in procession in imitation of quadrupeds. Can it be supposed that such a person would conclude the various groups of beings whom he had surveyed to be of *one* nature, *one* tribe, or the offspring of the same *original stock*? It is much more probable that he would arrive at an opposite conclusion.” But he justly adds, “It is only by tracing the history of the diversified human races from ancient times, and by comparing the former with the present state, we are made aware of the great changes which time and circumstances have effected in the condition of particular nations, and are brought to admit the probability of the opinion, that being apparently so different in their manner of existence, they can be in any way allied.

“It is this inquiry that brings within our observation, in the first instance, one of the great distinctions between the nature of man and that of animals. I allude to the *uniformity* of habits in successive generations which prevails through all the tribes belonging to the lower departments of the living

world, and *variations* which take place in human races, and their tendency to improve or to alternate periods of improvement with reverses and retrograde changes.

The Numidian Lion and the Satyr of the desert, the monarchies of Bees and the republics of African Termites, are precisely today what they were in the age of Æsop and in the kingdom of Juba; while the descendants of the tribe, who are described by Tacitus as living in squalid misery in solitary dens, amid the morasses of the Vistula, have built St. Petersburg and Moscow, and the posterity of cannibals and Phthirophagi, now feed on pillaus and wheaten bread. When we consider that the habits of men are so changed in some races whose past and present state comes within the sphere of history, we cannot presume to determine that such differences as those to which we have before adverted may not have been the result of circumstances favouring the progressive improvement of our race, and in other instances preventing it, or forcing a tribe already civilized to return to the brutality of savage life.\*

After a thorough and searching investigation into the history of the different savage nations, and proving beyond controversy, that they are all *degraded castes* from recognized human races, and after illustrating the fact in the conversion of the Hottentots into Bushmen, for the change of a mild, confiding, and unenterprising race of shepherds, into fierce, suspicious, and vindictive savages, who issue from the fastnesses of their rocky deserts only to plunder and destroy, as has been witnessed even within the present generation, as the result of the encroachments of European colonization on the one hand, and of the Kafirs on the other, Dr. Prichard thus concludes:—"We contemplate among all the diversified tribes who are endowed with reason and speech the same internal feelings, appetencies, aversions, the same inward convictions, the same sentiments of subjection to invisible powers, and more or less fully developed, of accountableness or responsibility to unseen avengers of wrong, and agents of retributive justice, from whose tribunal men cannot even escape by death. We everywhere find the same susceptibility, though not always in the same degree of forwardness or ripeness of improvement, of admitting the cultivation of these *universal endowments*, of opening the eyes of the mind to the more clear and luminous views which Christianity unfolds, and of becoming moulded to the institutions of religious and of civilized life; *in a word, the same inward and mental nature is to be recognised in all the*

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\* Dr. Prichard's Natural History of Man, p. 487-8.

*racés of men.* When we compare this fact with the observations, fully established, as to the specific instincts and separate psychical endowments of all the distinct tribes of sentient beings in the Universe, we are entitled to draw confidently the conclusion, that all human races are of one *species* and one *family*." In these sentiments and in this conclusion I think we must all cordially agree with Dr. Prichard; for, as assuredly as God made of one blood all the nations of the earth, so has he endowed them all with the same animal, intellectual, moral, and religious nature, and thus has he bound them together—in accordance with the high behest, that they should increase and multiply, and replenish the earth, *in one common bond of universal brotherhood*. But, again I would ask, are we not, from a strictly psychological view of the subject necessarily led to the same conclusion. It is never to be forgotten, that man is born into the world, not a mere blank recipient of impressions, and that the human mind comprehends *implicitly* from its earliest existence *every thing* which its interior nature is calculated afterwards to develope. For the germs (so to speak) or essential elements of all his mental activities, his sensational, emotional, perceptive, and intellectual as constituent endowments, are present *from the first*. They exist implicitly, *ab initio*, in every *mens sana*, and in due order and succession, they are each severally evolved *explicitly* as the successive phases of consciousness become developed.

To my friend, the late Mr. George Combe, belongs the honour of having first clearly demonstrated that the harmony which exists between the constitution of nature and the mental constitution of man is an all pervading principle of Creation, and a perfect and beautifully symmetrical system—thus indisputably establishing the fact, that the world throughout its constitution is framed in admirable adaptation to the faculties of man, as an intelligent, a moral, and a religious being.

But by no teaching, by no training or culture can we create a new mental faculty, any more than we can invent a new law of nature, or give a new organ of sense; and thus while on the one hand, where the germs or essential elements of an intellectual, moral, or religious nature are wanting and do not exist implicitly, *ab initio*, whatever may be the race to which the individual belongs, whether Caucasian, Mongolian, or Ethiopian, it is hopeless to expect that such a nature can be educed and evolved, so on the other hand, and as the tree is known by its fruits, wherever we meet with unmistakable evidence of the workings of an intelligent nature, and with proofs of the existence of moral and religious intuitions manifesting themselves in the sympathies and susceptibilities

of affection, and in an internal consciousness of accountability, more or less obscurely developed in the feelings of self-condemnation for guilt, and the desire of expiation, we at once recognize the germs or essential mental endowments, however obscurely they may be developed, of our *common* humanity or brotherhood. And to what race can we point as destitute of the instinctive, sensational, perceptive, and intellectual intuitions of the mind. The Hottentots, as a branch of the Mongolian race, and from whom the *Bushmen* are a degraded caste, may not range high in the scale of civilization and refinement. But let me remind you of what Holbein, the Dutch voyager, has said of them:—their besetting sin was indolence,—dirty and slothful in their habits, they seemed to hate the trouble of thought,—but they were not deficient in intellect. He knew many who understood Dutch, French, and Portuguese to a degree of perfection;—one particularly, who learned English and Portuguese in a very short time, and who understood and spoke them with surprising propriety and readiness. They had a firm belief in *supreme powers*, both of good and evil, and religious rites to conciliate them. They held the soul to be *immortal*. They opposed the introduction of christianity at first; but eventually lent a more ready and willing ear to its preachings, than any other uncivilized nation had done, and speedily improved, through its reception, not only in moral character and conduct, but also in outward circumstances and prosperity. So again of the negro race, can we not point to distinguished characters, both in literature and science amongst them? And as to the general character of their mental endowments, Dr. Carpenter has well observed—“It is not a little interesting to remark, that there are elements in their character, which have been deemed by competent judges, capable of working a considerable improvement in even Anglo-Saxon civilization; for many intelligent thinkers have come to the conclusion, that the boasted superiority of the latter, is after all, more *intellectual* than *moral*, and that in purity and disinterestedness of the affections, in child-like simplicity and gentleness of demeanour; in fact, in all the milder graces of the Christian temper, we have much to learn from the despised *negro*. And what were the aspirations, or rather, reasonable hopes, of the philanthropic Channing, after much observation on the race. “I would expect of them, says he, if civilized, less energy, less courage, less intellectual originality than in ours; but more amiableness, tranquillity, gentleness and content; they might not rise to an equality in outward circumstances, but they would probably be a much happier race.”



I need not further enlarge upon this point—but with the recognition of the *right* of the degraded bushman and the negro to our common humanity assuredly comes the *claim* of the duties of brotherhood towards them, and they incur a grave responsibility, who would enslave and hold in bondage their fellow men, “as *domestic cattle* or *wild fowl*.” Before that all important *unity* of the human species which has its firm and solid basis in the participation of every race, in the same intellectual, moral and religious nature, and in the community of the same social and moral rights, alike the privilege of all, the unity from the consanguinity of a common descent, sinks into comparative insignificance. But to conclude—Admitting that the unity of the species by physiological and psychological evidence has been established, the “*quæstio vexata*” still remains: Have there been more creations than one of the same genus, more Adams and Eves than one single pair?

That distinguished naturalist, Professor Agassiz, contends, that it is impossible to account for the geographical distribution and varieties of conformation of many existing species of animals, and he includes man in the number, without having recourse to the idea, that instead of the individuals of a species having descended from a *single parentage*, or pair of ‘*protoplasts*,’ they are the offspring of several distinct pairs of ‘*protoplasts*’ first introduced in different localities, all presenting the same essential nature, modified in accordance with the special conditions in which each was destined to exist. But to this hypothesis of the radiation of species from several distinct centres, the late professor Edward Forbes was strongly and decidedly opposed. Maintaining as he did, that the peculiarities in the geographical distribution of existing species, is quite reconcilable with the idea of *migration* from *single* centres, and that generally speaking they necessarily lead to this idea; whilst, on the other hand, in those instances in which detached or outlying spots occur, remote from the principal area of distribution, and from each other, he considers that these represent the original extent of range, which has been subsequently interrupted by geological changes, that have been fatal to the existence of the species, over the intermediate connecting area; and he affirms, that in many cases, these peculiarities may be thus explained, by known geological changes since the introduction of the species in question. It is greatly to be regretted, that he did not live to give his matured views on the subject to the world in a more complete form than by oral discourses.

With Prichard, Latham, and Forbes, my own mind at present

rests in the conviction so well expressed by Dr. Carpenter, that the supposition of a number of distinct '*protoplasts*,' one for each principal region of the globe, is not required to account for the extension of the human family over its area, and it does not afford any assistance in accounting for the phenomena of their existing distribution; since each principal geographical area contains races of very diversified physical characters, the affinity of whose languages makes it next to certain that they must have had a common descent."\*

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XVI.—*On the Pagan (non-Mahometan) Populations of the Indian Archipelago, with special reference to the colour of their skin, the texture of their hair, and the import of the term Harafura.* By R. G. LATHAM, M.D., F.R.S., Hon. F.E.S.

THE object of the present paper is to illustrate some obscure statements respecting certain occupants of the Indian Archipelago, concerning which more than one over-hasty notice, adopted from the older and more ill-informed authorities, has been allowed to stand in works of current repute. These are to the effect that there are to be found, in the Indian Archipelago, in a fragmentary state, and sporadically distributed, several populations of which the skin is so dark, and the hair so frizzly, as to justify us in calling them Negro, or, at least, Negritos.

That tribes with characteristics of this kind are numerous when we get to the east of the Archipelago, is true; for it is true that both New Guinea and Australia, along with many other islands of less importance, are the occupancies of a black population which contrasts unfavourably with the Malays, Javanese, and Bugis of the islands to the west. It is also true that in the way of colour, hair, or both, these populations have suggested a comparison with the blacks of Africa.

From New Guinea, then, eastward, all is plain and clear; for, with New Guinea begins the land of the Papua, so called by the Malays from the frizzly texture of their hair. From New Guinea eastwards darker skins, a lower civilization, and pagan creeds prevail.

But what is the case with the Indian Archipelago itself?

To the north and north-west of Sumatra, either on the con-

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\* Dr. Carpenter, *On the Varieties of Mankind*, in Dr. Todd's *Cyclopædia of Anatomy and Physiology*, vol. iv, p. 1364.